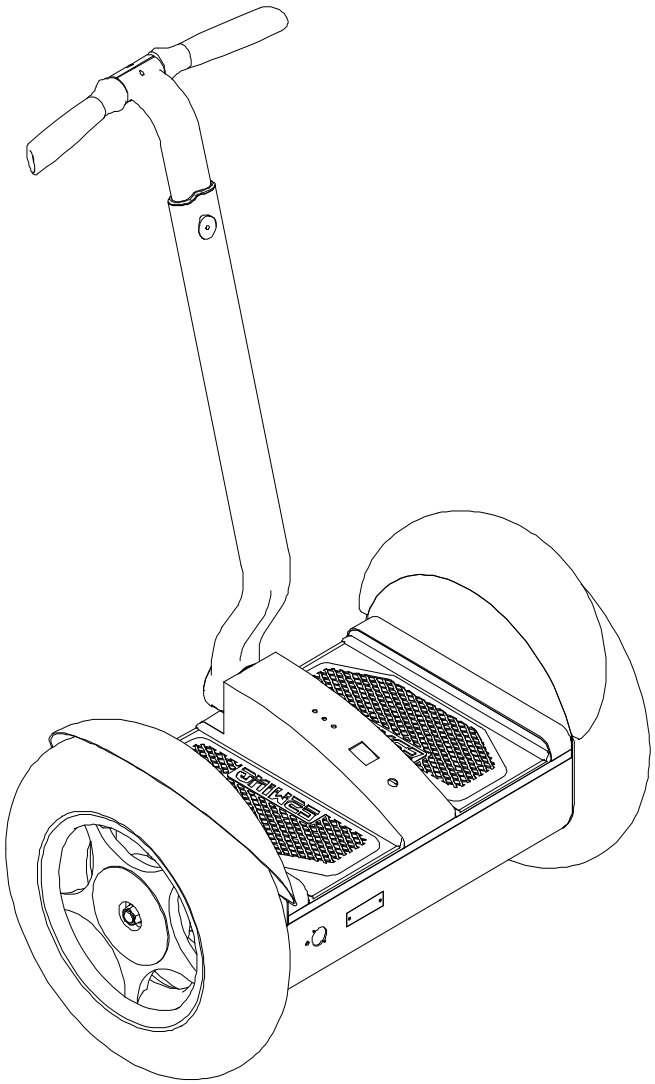
User Manual for 2-Wheel Electric Scooter



When our chariot scooter (Smart Vehicle) are sold, it comes with this user manual for the users' reference.

Our User's manual is applied to all the Smart vehicles chariot scooter made by our factory. You may find that some function is different from what you ordered.It is normal because of different series.

The content and technical specification in this manual are valid when permitted to be printed. But our company has the right to alter and change technical specification or design without prior notification.And we will not assume any obligation.

To ensure our chariot scooter brings you the best driving experience, the best way is to read the user manual carefully, you will learn how to drive this future transporter. After reading, please keep the user manual well so that you can refer to it any time when you need.

The warranty card will come with chariot scooter.You can find your warranty rights in the user manual.Please read the user manual carefully so that you can know your rights and responsibilities well.

Please maintain chariot scooter according to the user manual so that you can keep the scooter in the best condition.We have professional people who will supply you good after service and answer any questions and problem you care.

Sincerely wish you a nice driving!

Safety Instructions

For adults use only!

Please abide by your local traffic regulations!

Please wear helmet, knee and elbow guards for safety purposes.

Please read the relevant driving guidelines in this manual!

It is hard for us to list all associated dangers when driving and maintaining chariot scooter, therefore, please be careful and pay attention to the safety of yourself and others when riding.

The user manual contains important safety information --- Please read carefully.

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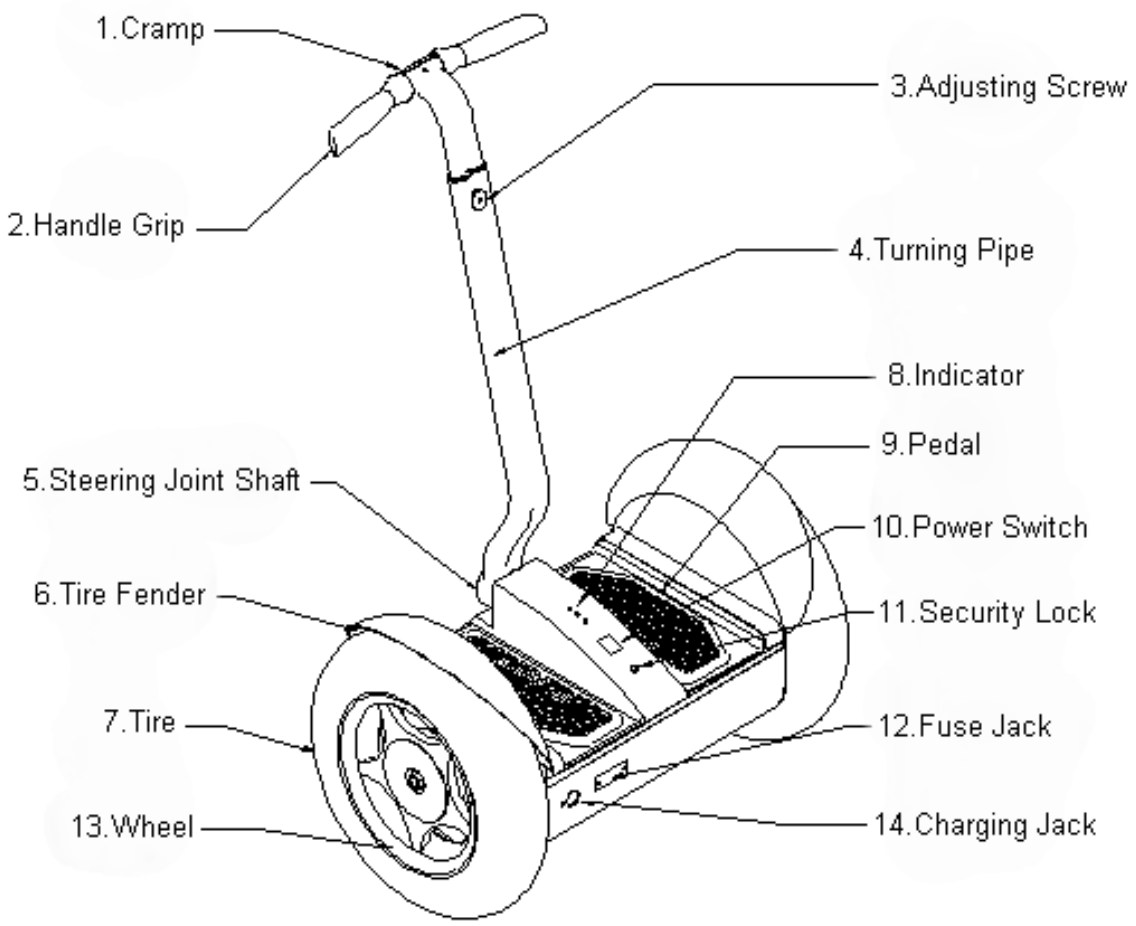
Chapter I Introduction of chariot scooter

The working principle of the two wheeled Scooter is based on the basic principle called "dynamic stability" which is the automatic balance ability of the vehicle itself. After judging body posture position with a built-in precision solid gyroscope, the vehicles electronic brain works out proper instructions through a sophisticated and high-speed central microprocessor, the 24V-28Ah battery drives the motor to balance the vehicle.

As a new transporter, chariot scooter is difficult to classify in the traditional way, some people think that chariot scooter should be a kind of double-wheeled Unicycle, while other people think it should be classed as a power stand-up Scooter, with its uniaxial double design which is different from the traditional biaxial double scooter, for official road regulations, this transporter is called Electric Personal Assistive Mobility Device (EPAMD)

The vehicle is equipped with dual wheels, its width is as narrow as a normal adult shoulder's width.It is 43 kg and battery-operated.It is not necessary to have a brake or throttle during driving.When the driver leans their body forward, chariot scooter will run forward, when the body is upright, it will stop. It uses the dynamic balance principle, as the body moves to change the center of gravity so as to keep balance. Just as the human body stands and leans forwards it can lose balance, but the body's natural instinct will maintain balance, the dynamic stability replicates this. chariot scooter uses the wheels to replace the function of the feet, reproducing the high precision balance action of a human, it is also cheap and convenient to use. The energy comes from two repeat charging BTM batteries which are free from maintenance. If sufficient power is supplied to your battery, the full charge capacity will last continuous for 5 hours driving, the driving range depends on the way you drive and ground conditions, driving on grass and slopes will consume more driving power.

Chapter II Parts Explanation



Picture 1

1.Handle Bar/Turning Pipe

(1)Used to control and make the chariot scooter turn left or right, turn around, rotate 360 degrees .It also has support function and can play a subsidiary role in keeping

body balance.
(2) The height is adjustable. The driver can adjust it according to his or her own height to make the handle bar comfortable.
(3) Lock the steering rod after adjustment, then turn the handle bar to confirm that it has had been locked.
(4) Above adjustment of the handle bar/ turning pipe should be locked in position before driving.
(5) The turning pipe can be taken apart easily for carrying or storage.

2. Power Switch

(1) The power switch is used to turn on and off the power, when the power switch is on the chariot scooter will finish the initialization-settings.
(2) It is dangerous to stand on E-swing without turning on the power.

3. Pedal Switch (SAFE switch)

(1)The pedal can be active up or down, it has a built in safety switch.chariot scooter can check whether someone on scooter by pedal switch.
(2) The pedal switch is safety insurance, when driving, if the driver leaves the chariot scooter, the pedal switch will reset and then will stop after 2 seconds.

4. Indicator Lights on Pedal

(1).Green light (Operating light 1)
Display system working sate and battery state.
(2) Orange light (warning light 2)
Display overload and battery state.
(3) Red light (warning light 3)
Display alarm message and battery state.

Chapter III Getting Started

1. The Right Starting Operation

Hold the turning pipe/handle bar with one hand, keeping the pedal upright ,turn on the power making the green light stay on continuous, this means starting is a success (refer to picture 2,3,4). Then hold the handlebar firmly with two hands (refer to picture 5). Make sure the pedal is placed upright and then turn on the power switch. Because chariot scooter will consider the current pedal's position as its original position setting. This is a very important step. If the original position is not set

correctly, it will upset the vehicle's balance during driving.

Picture 2

Picture 3

Picture 4

Picture 5

2.The Wrong Starting Operation (refer to picture 6 and 7)

chariot scooter will consider the current pedal's position as its original position setting, so it is hard for driver to stand on chariot scooter if the pedal is not vertical. The original position can be reset after repeated power on and off. For example, you can turn off chariot scooter and put the pedal vertical, then turn it on and test it, try this adjustment until it is in best state.

Picture 6

Picture 7

3. Correct Example As Follows (refer to picture8)

(Must keep chariot scooter vertical before powering on)

Picture 8

Chapter IV Driving

Driving the chariot scooter 2 wheel self-balance vehicle is totally different from anything you may have driven before, chariot scooter does not have a brake, accelerator or gear system. Please read the user manual or get instruction from an experienced person before your first ride.

chariot scooter is very addictive once you enjoy the fun of driving, you will not help yourself driving it whenever you get the chance, following these instructions will be beneficial for your enjoyment.

1. Standing on chariot scooter

After switching on, hold the handlebar with left hand. meanwhile step on pedal with right foot (refer to picture 9); or hold the handlebar with right hand, meanwhile step on pedal with left foot (after you press down the pedal switch, chariot scooter will start computer balance, and you will feel very secure. The order is the left hand-right foot-left foot -right hand or right hand -left foot-right foot-left hand. By this time you will have stood on the balanced scooter. Stand upright without any action, just relax and keep your balance, Ewing will stop in original place (refer to picture 10).

Picture 9

Picture 10

2. Driving straight forward

Lean your body forward slowly using the centra of gravity, chariot scooter will move forward (refer to picture 11). The driving speed is controlled by the leaning angle of your body the more you lean the faster you will go, the less the slower. For a stable driving, we suggest leaning forward slowly. It is dangerous for lean forward suddenly; this is just like sudden acceleration when driving a car.

Picture 11

3. Braking, Driving Backward

Driving backward is not recommended for the driver's safety, because it is hard for you to see behind when driving .Turning radius of chariot scooter is zero, which you can easily achieve in a continuous spin around 360 degrees on the spot. When you drive forward in a straight line and you want to slow down or stop, you can lean backward or squat down (the center of gravity backward). Lean slowly or smoothly

backward is helpful for slowing down and stopping safely (refer to picture 12).

Picture 12

Tip: Driving forward in a straight line you just simply push the handle forward, then backward to slow down or stop.

4. Turning in Original Place, Turn Around and Rotate 360 Degrees

It is easy turning the chariot scooter when driving. Keep the turn pipe/handle bar left-forward or right-forward to the end, at the same time keep your body corresponding, left-forwarded or right-forwarded as the trend of chariot scooter (refer to picture 13 and 14).Thus you can easily achieve various turns. When the chariot scooter faces the right position, you only need return the pipe to the original position and stand straight chariot scooter will stop.

Picture 13

Picture 14

5. Turning in Driving

chariot scooter's turning range is calculated automatically according to the driving speed, the speed is faster, the turn range will be less to ensure safety of the driver, it is stopped by the turn pipe and body's corporation. To turn left, the turn pipe should be swung smoothly to the left at the same time as your body leans left. The angle of chariot scooter's turning is decided by the swinging angle of the turning pipe and the leaning of your body.

Tip: the actual turning is finished by the above combination of actions, driving the chariot scooter is like a combination of riding horses and skiing, or the movement is like Michael Jackson's dancing. chariot scooter also is called a thinking car. Which means the driver can drive chariot scooter according his thoughts.

6. Driving in Bad Weather

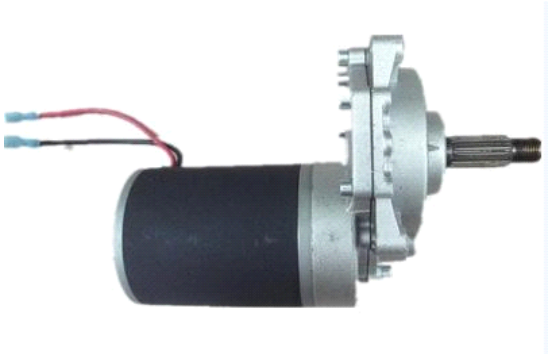
chariot scooter is not waterproof please do not drive chariot scooter on rainy days. It is easy to damage the motherboard (refer to picture 15) and the motor (refer to picture 16) if water gets into the electrics.

chariot scooter cannot be driven in the snow.

chariot scooter does not have night lights, so please do not drive chariot scooter in the dark

In China, chariot scooter is hard to define, so please don't drive on public roads used for motor vehicles .When driving on the sidewalk, single driveway or public places, please comply with local traffic regulations and the local bye laws.

Picture 15



Picture 16

Chapter V Charging

When you find the orange lamp and red indicator is continuously on, it shows the battery needs to be charged. First, turn off the power switch and use the specialized 24 V battery charger. Insert the plug into chariot scooter's charge jack, then connect the power. When charger is connected the Red light will glow continuously, showing chariot scooter is in charge mode (refer to picture 17).

The charger has two indicators-the red light means on charge, Green light means fully charged, pull out charger. The input voltage of charger is 110-240v, output voltage is 25-27v, AC electric current is 1.2 -1.5 A, The charger takes 8-10 hours to fully charge. When fully charged the green light will be on continuously the charging electric current will then decrease output. The charger will become warm when charging, so please keep in suitable place.

Picture 17

Please keep power switch of chariot scooter off when on charge, otherwise, chariot scooter will cause power consumption, which is bad for charging.

Chapter VI Maintenance

All other items that are not mentioned below should be done by a professional person or technician.

1. The Maintenance of Battery

chariot scooter use BTM free maintenance battery. When you find the orange lamp and red lamp light continuously on, please charge. Keep the charge time to no more than 15 hours. If you are not using chariot scooter for long periods, keep it charged, excessive discharge and re- charge is bad for the battery's life and can even lead to having to scrap the battery. (Suggestion:please keep it charged every month even you don't drive it)

2. When not Drive chariot scooter

Please turn off the power switch then lock the switch, in case of accidental starting.

3. Replacing Fuse

The fuse of chariot scooter is 40A car fuse, the fuse maybe burned after overload or crashed sharply, when you find that there is no action, and the indicator is off after switching on, check the fuse if it is burnt out, you need to replace fuse, open the fuse cover at the back of body with screwdriver, take out the fuse using clamp and replace with a new fuse.

4. Fastening Nut of Tire

Pay attention to the big nut on the wheel, regularly check, if it is loose tighten with a 21mm spanner to 108 torque.

5. Maintenance of Tire

The normal air pressure is the basic conditions to guarantee your safe driving .The standard tire pressure is 250 kpa = 2.5 bar = 2.55 kg/cm2 = 36.25 psi, that is what we recommend. It is necessary to check the tire pressure regularly, under inflation and excessive inflation will cause unequal tyre wear, which influences comfort and mileage and shorten the life of tyre, under-inflated tyres also influence power saving.
Also check for cuts and splits which could cause the tyre to deflate at a rapid rate, causing injury to the rider.

6. Appearance Cleaning

It is necessary to keep the pedal and body of chariot scooter clean. Please clean the gravel, soil and mud off after you're driving. Don't use any corrosive chemical such as

petrol to clean chariot scooter, you can clean chariot scooter by using soft cloth and brush, don't wash chariot scooter with water.

Chapter VII Notice

1.Keep Pedal of chariot scooter Horizontal

chariot scooter will consider the current pedal's position as its original position setting when power on, so the pedal must not be horizontal after the power is switched on; it is hard for the driver to stand on chariot scooter if the pedal is not vertical. The position of pedal may have change when gyroscope has not warmed up. If the position of pedal is in the wrong position when started, adjust by repeated power on-off.

2.Balance Output of chariot scooter

Computer balance will start immediately after you press the pedal switch of chariot scooter. If you keep pressing the pedal switch, the computer balance will always start, the computer will keep balance even if the pedal switch is restored (the pedal switch is pulled up) when at a low speed. In case driver needs leave and push the chariot scooter. Please pay attention, chariot scooter will have a tendency to move forward even if without load, the chariot scooter will keep computer balance. Therefore do not leave chariot scooter without a driver on the road, chariot scooter will run automatically by itself until it falls down.It is normal.

3.chariot scooter Standing

When you want to make chariot scooter stand after driving, you can turn off power and put bracket down.

4. Accident Water

Turn the power off immediately if chariot scooter falls into water accidentally. Do not drive it again if you are not sure, or if any fault does not correct itself the chariot scooter weighs 43kg. You can pull it easily without power home and then contact us; we will give you after service guide.

5. Lock Switch

Locking chariot scooter to prevent running by accident(refer to picture 19).Power off then lock, when you power on again ,red light will flash 4 times, it means chariot scooter is locked.

When you power on and chariot scooter start to initialize, if you lock chariot scooter at this time's locking will lead to pedal switch short circuit. chariot scooter will think

that driver has stood on it and then start automatic balance. It is dangerous to drive chariot scooter in this case, because pedal switch will keep connected. chariot scooter will not stop and keep moving all the time.

Chapter VIII Indicator and Sound Alarm

1.Indicator introduction

1).Green light(operating light 1)

Continually On (no blinking): chariot scooter goes well. Battery is in normal state.

(2) Orange light (warning light 2)

Blinking: overload! Motor will automatically slow down.

Continually On (no blinking): battery is low power; it need be charged in time.

(3) Red light (warning light 3)

Continuous on (no blinking): battery run out and must be charged immediately.(refer to picture 18)

Fast blinking during driving(sound alarm continuously): It means that you should adjust your body when moving forward at high speed. At this time, the chariot scooter will upright itself automatically to stop the driver from leaning forward, to limit the speed and keep the driver safe.

Picture 18

2.The three indicator flash at the same time: The pedal switch is not in the correct position (the pedal switch is pressed down) or the driver has left the chariot scooter when driving, which can make the pedal switch reset (the pedal switch is pulled up).In this situation, if the pedal switch is still not in the correct position (the pedal switch is pressed down), chariot scooter will think driver has fallen off and will stop automatically to keep the driver safe.

Please remember, pedal switch must be in right position (the pedal switch is pressed down), or chariot scooter will switch off power and the rider will lose balance.

3.Red Light Flash 4 Times (Sound alarm 4 times)

(1)Check whether Lock is locked. Red light will flash 4 times when you power on if the lock is locked. chariot scooter is locked when in transportation to avoid accident. So please unlock chariot scooter before your test drive when it is received.

(2)Pedal problem also can lead red light to flash 4 times, you can press pedal switch several times by using your hand to make pedal restore (the pedal switch is pressed down).Then power on chariot scooter, if red light still flash, please contact us.

4.Red Light Flash 3 or 2 Times (Sound alarm 3 or 2 times)

The vehicle may have a problem when you see the following situation after the power is turned on.

Red light flashes 2 times (sound alarm 2 times): problem with gyroscope.

Red light flashes 3 times (sound alarm 3 times): problem with accelerometer.

In above two situation,it means that transducer has problem.Please turn off power and stop driving, then contact us.

5.Red Flash Continuous, chariot scooter Has No an Action

chariot scooter has over current system, the inner over current system will protect chariot scooter when you crash or short circuit .At this time, red will flash continuously and chariot scooter will stop any action. In this situation, power off then power on. Test chariot scooter to see if it will work, if not please contact us.

6.Function of battery display and sound alarm

Green light Continually On: Display system working well and battery in normal state.

Orange light Continually On: battery is low on power; it should be charged in time.

Red light Continually On: battery power run out and must be charged immediately.Meantime,it will make sound alarm every five seconds to remind your charging as soon as possible.

Always keep battery charged before it is fully run out (red light is continually on). It is harmful to battery and will reduce battery's life.

Chapter XI Technical Data

Net Weight	43 kg
Dimension	43*43*68 cm
Max cruise speed	18km/h
Max load	125 kg
Max. Mileage (after full charging)	30-35 km
Max climb capability	30 degree
Min turning radius	0
Charging time	8 h-10 h
Battery	PB,24V,28Ah
Power	Two imported DC Motor,DC servo drives
Voltage	100 v-240 v
Max Power	1600 watts (2*800 w/pc)
Lifetime of battery	1-3 years
Tire	17 in / 43 cm vacuum smooth
Wheel	12 in / 26 cm Black Aluminum Rim
Height of handle	80-110 cm adjustable
Height of footplate	10in/26cm
Specification of footplate	11.5×25 in / 16×40 cm
Max. Height above ground	13 cm
Standard Pressure	250 kpa
Certificates	CE & ROHS &FCC